



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,417	03/26/2004	Takahiro Iwasaki	04175.0059	7846
22852	7590	09/08/2006	EXAMINER	
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			VARGAS, DIXOMARA	
			ART UNIT	PAPER NUMBER
			2859	

DATE MAILED: 09/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/809,417	IWASAKI, TAKAHIRO	
	Examiner	Art Unit	
	Dixomara Vargas	2859	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-10 is/are rejected.
- 7) ☒ Claim(s) 1-5 and 11-21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08/28/06 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Omata et al. (US 6,442,356 B2) and Sasamoto et al. (US 6,324,374 B1) in view of Faré (US 5,768,653 A).

With respect to claim 6, Omata discloses an image forming apparatus comprising (Figure 5): a plurality of image carriers (#101a-#101d); an intermediate transfer body (#190); a plurality of transfer units for transferring toner images formed on said plurality of transfer units being provided (#105a-#105d) corresponding to each of said plurality of image carriers and, contacting under pressure with each of said plurality of image carriers (as see on Figure 5) through an intermediate transfer body by the application of pressure when each of said plurality of transfer

Art Unit: 2859

units is operating (#190); a driving unit for driving said intermediate transfer body (#170a-170d); and control unit for controlling said driving unit (#180), wherein said control unit makes said plurality of transfer units to be selectively operated according to the kind of image and said control unit changes a control method for said driving unit according to the kind of image (Columns 8-9, lines 49-67 and 1-17 respectively).

Also, Omata discloses the claimed invention as stated above except for having a plurality of transfer units not contacting each of said plurality of image carriers when each of said plurality of transfer units is not operating. However, Sasamoto discloses a plurality of transfer units not contacting each of said plurality of image carriers when each of said plurality of transfer units is not operating (Figures 2, 4, 7-8, 18 & 24-26). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a plurality of transfer units not contacting each of said plurality of image carriers when each of said plurality of transfer units is not operating as taught by Sasamoto with Omata's image forming apparatus for the purpose of applying pressure only with the rollers to be used, for example if a color image needs to be done, then all the color rollers will be pressing against the PC drum but for a black and white image, only the black roller will be pressing the PC roller to do the image as taught by Sasamoto (Column 12, lines 7-67).

In addition, Omata and Sasamoto disclose the claimed invention as stated above except for the control unit being capable of performing speed control. However, Faré discloses a speed control means (Figure 1, #12). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use perform speed control as taught by Faré with Omata and Sasamoto's image forming apparatus for the purpose of achieving high printing

Art Unit: 2859

resolution or higher productivity depending on the speed as taught by Faré (Column 9, lines 9-67).

4. With respect to claim 7, Omata discloses an intermediate transfer body (#190), wherein said plurality of transfer units is fixed (#105a-#105d) to said plurality of image carriers (#101a-#101d) through said intermediate transfer body by the application of pressure (as seen on Figure 5).

5. With respect to claim 8, Omata discloses control unit that controls said driving unit to drive said image carriers according to correction information based on a mechanical resonance frequency of the driving systems of said image carriers corresponding to the kind of image (Columns 8-9, lines 49-67 and 1-17 respectively).

6. With respect to claim 9, Omata discloses the correction information is correction information for feed-forward control, and said control means controls said driving means to perform feed-forward control of said image carriers based on the correction information (Columns 8-9, lines 49-67 and 1-17 respectively).

7. With respect to claim 10, Omata discloses storage means for storing plural pieces of correction information in association with kinds of images, wherein said control means reads the correction information from said storage means according to the kind of image, and controls said driving means to drive said image carriers based on the correction information (Columns 8-9, lines 49-67 and 1-17 respectively).

Allowable Subject Matter

8. The following is a statement of reasons for the indication of allowable subject matter:

Art Unit: 2859

- a. With respect to claim 1, the claim has been found allowable over the prior art of record because the prior art of record fails to teach or fairly suggest an image forming apparatus comprising a control unit for controlling a plurality of driving units to drive said plurality of image carriers under feed-forward control and feed-back control; the control unit controlling said plurality of driving units according to a correction information, wherein the correction information used for the feed-forward control is different depending on a kind of image in combination with the remaining limitations of the claim.
- b. With respect to claims 2-5, the claims have been allowed due to their dependency on claim 1 above.
- c. With respect to claim 11, the claim has been found allowable over the prior art of record because the prior art of record fails to teach or fairly suggest a method for operating a color image forming apparatus comprising the steps of controlling the speed of each image carrier under a feed-forward control and feed-back control based on the read correction information, wherein the correction information used for the feed-forward control is different depending upon the kind of image in combination with the remaining limitations of the claim.
- d. With respect to claims 12-19, the claims have been allowed due to their dependency on claims 1 and 11 above.
- e. With respect to claim 20, the claim has been found allowable over the prior art of record because the prior art of record fails to teach or fairly suggest a method for operating a color image forming apparatus comprising the steps of controlling the

Art Unit: 2859

rotational speed of each image carrier based on the read correction information under a feed-forward control and a feed-back control, wherein feed-forward control is carried out for a full color image and feed-back control is carried out for a mono-chrome image or a uni-color image in combination with the remaining limitations of the claim.

Response to Arguments

9. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dixomara Vargas whose telephone number is (571) 272-2252. The examiner can normally be reached on Monday to Thursday from 8:00 am. to 4:30 pm..

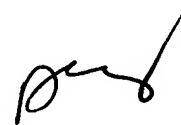
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on (571) 272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2859

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Dixomara Vargas
Art Unit 2859
September 5, 2006



Diego Gutierrez
Supervisory Patent Examiner
Technology Center 2800